

PUMPING PLANT FOR WATER CONTROL

Design Survey

The following information shall be obtained and recorded in the field notes:

- a. Topographic survey or profile of suction and discharge line.
- b. Minimum and maximum water surface elevation at source.
- c. Available power sources.
- d. Required maximum discharge elevation & minimum pressure requirements.
- e. Required discharge.

Design Data

The following will be considered minimum in the design of pumping plants. The information will be recorded in the design notes:

- a. Alternate elevations of hydraulic grade line.
- b. Alternate horsepower requirements.
- c. Pump selection based on maximum efficiency and power source available.
- d. Structural design for sump and pump installation.
- e. Housing for installation.
- f. Selection of automation and safety accessories.
- g. Records indicating NRCS obligations regarding State and Federal regulations have been met.
- h. Quantity computations.

Drawings and Specifications

The construction drawings shall include but will not be limited to the following:

- a. Plan view of system.
- b. Detailed plan and sectional views of all structures.
- c. Profile of installation.
- d. Detailed view showing size and location of safety devices and appurtenances.
- e. Diameter, type, class, thickness and coating requirement for all pipes involved.
- f. Table of quantities.
- g. Location map.

Practice specifications along with applicable "Items of Work and Construction Details" shall be provided for each item or phase of construction. There are no standard specifications covering a pump or power unit. Sufficient information must be provided to enable a supplier to furnish a unit that will meet the requirements of the system at or near the design efficiency specified.

Pumping Plant for Water Control Documentation 533

Layout Survey Notes

The following information shall be recorded in the field notes:

- a. Alignment stakes with offset reference hubs and stakes.
- b. Required cut stakes.
- c. Appurtenance location stakes (if required).

Compliance Checks

The complexity of the pumping plant will dictate the need for compliance checks during construction. All compliance check shall be recorded in the field notes. Narratives of construction checks shall be recorded in the job diary or on a sheet in the field notes. Compliance checks shall include but will not be limited to the following:

- a. Dimensions and elevations of structures.
- b. Data from information plate on pump and power supply.
- c. Material quality.
- d. Location, type and size of appurtenance.
- e. Field test of installation.
- f. Statement of compliance.

As-Built Plans

As-Built plans shall be prepared for all pumping plants. These drawings shall reflect all significant changes in measurements, quantities, alignment, elevations, or design changes. If there were no significant changes, the original drawings shall be marked "As-Built".